

ZEDGINIDZE, Ye.N.; PIRTSKHALAVA, Ye.A.; MAMULASHVILI, N.K.; BAGATUROVA,

Studying laterite clays of the Tsetskhlauri deposit. Soob.AN Gruz. SSR 25 no.5:539-542 N 160. (MIRA 14:1)

1. Akademiya nauk GruzSSR, Institut prikladnoy khimii i elektrokhimii, Tbilisi. Predstavleno akademikom R.I.Agladze. (Kobuleti District--Laterite)

KUTATEIADZE, K.S.; ZEDGINIDZE, Ye.N.; PIRUMOVA, R.A.

Carborundum tips with nitride bonding for immersion thermocouples.
(NIRA 15:3)

Stal' 22 no.3:237 Mr '62.

1. Nauchno-issledovatel'skiy institut promstroymaterialov
Grusinskoy SSR.
(Thermocouples)

37231 s/131/62/000/005/002/004 B105/B138

24.5500

15.2210

Kutateladze, K. S., Zedginidze, Ye. N., Nozadze, T. V.

AUTHORS: TITLE:

Sheaths for immersion thermocouples for measuring the

temperature of molten metals

PERIODICAL: Ogneupory, no. 5, 1962, 223-225

TEXT: The quartz sheaths used to protect the junctions of thermocouples only last for a single immersion in molten steel. Alumina sheaths with an admixture of 1% TiO2, made in the Podol'skiy zavod ogneupornykh

izdeliy (Podol'sk Plant of Refractory Materials), will stand two immersions, and zirconium dioxide sheaths made in the Institut metallurgii Ural'skogo filiala AN SSSR (Institute of Metallurgy of the Ural Branch of the AS USSR) can be kept in molten steel for 40-50 min. Those made by the process developed by the Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

last for 15 short immersions in molten steel at 1650-1720°C. This article presents the experimental results obtained for sheathe which stand Card 1/2

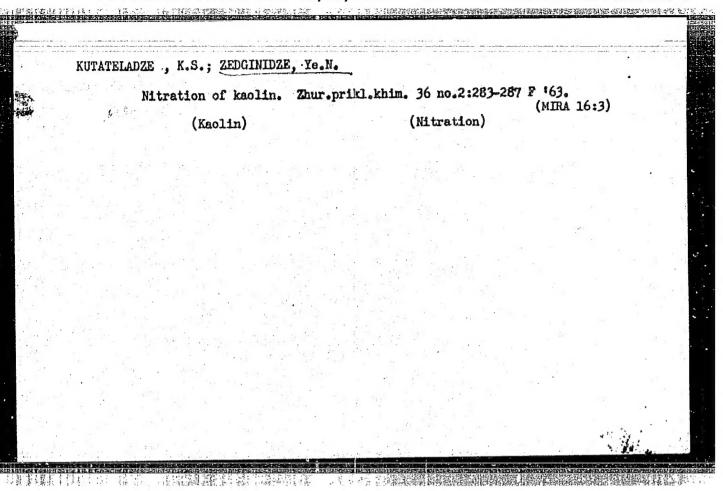
Sheaths for immersion thermocouples ..

S/131/62/000/005/002/004 B105/B138

repeated immersion in molten metals. They were produced from a mixture of 87.5% kaolin and 12.5% aluminum powder, dried out, and burned at 1400°C in purified nitrogen. Refractoriness was 1850°C, bulk weight 1.8 g/cc, porosity 38.4% and water absorption 21.32%. Experiments in molten steel, pig iron, ferromanganese, aluminum, zinc, cadmium, lead, tin, and bismuth showed that the sheaths could stand repeated immersions at temperatures ranging from 1620° for the steel to 350° for zinc. The technology suggested is simple, and the starting materials are inexpensive. There are 4 figures.

ASSOCIATION: NII Prometroymaterialov SNKh Gruzinskoy SSR (NII of Prometroy Materials of the SNKh, Gruzinskaya SSR)

Card 2/2



KUTATELADZE, K.S.; ZEDGINIDZE, Ye.N.; KARUMIDZE, R.A.

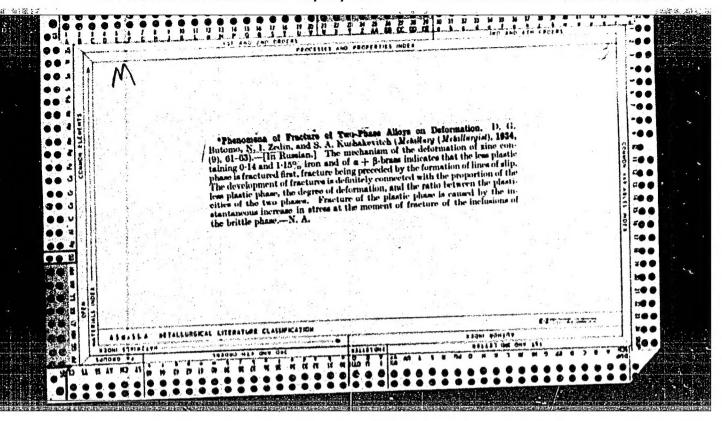
Thermocouple tips for measuring temperature of liquid aluminum.
TSvet. met. 38 no.9:53-54 S 165.

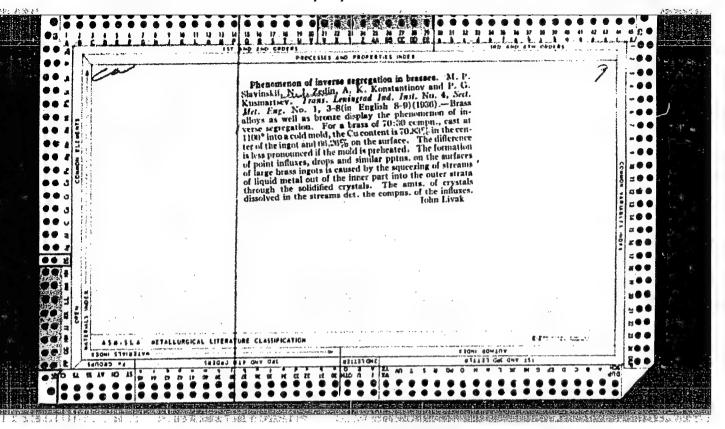
(MIRA 18:12)

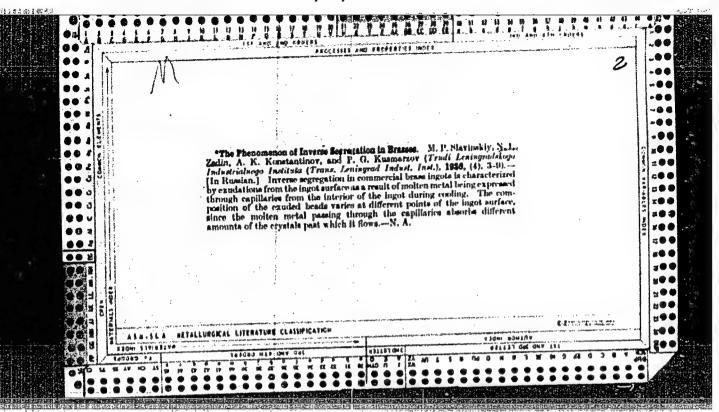
EWP(a)/EWT(m)/ETC/EPF(n)=2/EWG(m)/T/EWP(t)/EWP(b) IJP(c) .
TO Ama/TO Ama

SOURCE CODE: UR/O131/65/000/012/0008/0013 L 10255-66 AP6000751 ACC NRT JD/WW/JG/tm 16 Kutateladze, K. S.; Zedginidze, Ye. II.; Karumidze, R. AUTHOR: ORG: Thilisi Scientific Research Institute of Building Materials (Thilisskiy nauchno issledovatel'skiy institut stroitel'nykh materialov) TITLE: Aluminonitrosilicothermic preparation of nitride refractories SOURCE: Ogneupory, no. 12, 1965, 8-13 TOPIC TAGS: refractory product, corundum refractory, refractory compound, refractory oxide, silicon compound, nitride, thermal stability, high temperature material, como isan ABSTRACT: A new type of corundum refractory containing silicon nitride binder has been prepared by the aluminonitrosilicothermic method proposed by the authors. The method which is described consisted of firing at 1400C a mixture of finely ground clay and aluminum powder in a stream of purified nitrogen. Under the given conditions, aluminum reduces silica from the clay to silicon and is oxidized itself to form Al<sub>2</sub>O<sub>3</sub>. Then, nitrogen reacts with silicon to form Si<sub>3</sub>N<sub>6</sub>. Samples of the new refractory contained 13-20% SigNu and combined high refractoriness and thermal stability, high resistance to molten metals, and acid-resistance with low oxidability in the air. The refractoriness was 1600 higher than that of the starting clay material and the yield point was above 1600C under a 2 kg/cm2 load. The samples remained unaffected after 50 thermal cycles. Crucibles made of the new refractory were Card 1/2 666.76:661.55

not wetted by molten ferrous and nonferrous metals even after 40 hr contact. Tubulatips made of the same material were unaffected by molten zinc; 7tin; 1ead; bismuth; 7 or cadmium after 200 immersions, and by molten aluminum after 600. Orig. art. has: 7 figures and 5 tables.  SUB CODE: 11 SUBM DATE: none/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 416/							,				57	AP6000	C NR	A(
tips made of the same material were unaffected by molten zinc? tin; Tead; bismuth, 7 or cadmium after 200 immersions, and by molten aluminum after 600. Orig. art. has: [JK]		8					10							
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ZEDIN, N. I.
A. P. SMIRYAGIO, Tsvet. Metally, 1940 (1), 96-105; (2), 72-79

ZEDIN. N. I.

FIASE I Treasure Island Bibliographical Report

AID 231 - I

Call No.: TN693.0925

Author: ZEDIN, N.I. and ZHOLOBOV, V.V.

Full Title: METALLOGRAPHICAL ATLAS OF COPPER AND COPPER ALLOYS

Transliterated Title: Metallograficheskiy atlas po medi i mednym splavam

Publishing Data

Originating Agency: None

Publishing House: State Publishing House of Scientific and Technical

Literature on Ferrous and Nonferrous Metallurgy

Date: 1949

No. pp.: 187

No. of copies: 2,000

Editorial Staff

Editor: Gagen-Torn, V.O., Professor

Ed.-in-Chief: None

Tech. Ed.: None Appraiser: None

Text Data

Coverage:

This atlus covers the macro- and microstructure of copper and its ternary and binary alloys (brasses and bronzes). Diagrams and photos given are explained in a detailed introduction discussing characteristics and physical properties of various alloys under differing conditions.

This is a useful compilation, but it is based on non-Russian nources, and presents no new data.

Card 2/2

AID 231 - I

Call No.: TMC93.0925

等。可以在在我们的是,但是他的时间,但是我们就是这种的的时间也可以可以可以不是一个。

Full Title: METALLOGRAPHICAL ATLAS OF COPPER AND COPPER ALLOYS

Text Data

Purpose: Intended for a wide circle of engineers, technicians and scientific

Workers connected with the production and application of copper and

its alloys.

Facilities: None

No. of Russian and Slavic References: 36 out of 81 (1904-1947). The authors

emphasize that they based their material on works by:

Prof. M.P. Slavinskiy, Prof. V.O. Gagen-Torn, Eng. D.G. Butomo, K.V. Gagen-Torn, I.E. Garshkov, B.F. Grashchenko, S.A. Kushakevich

and M.I. Makushenko.

Available: Library of Congress.

BUTOMO, D.G.; ZEDIN, N.I.

Cracks in rods of the alloy Kunial A. TSvet. met. 26 no.2:58-62
(MIRA 10r9)

Mr-Ap. '53.

1. Zavod "Krasnyy Vyborzhets."
(Gopper-nickel-aluminum alloys)

SOV/136-58-8-13/27

Butomo, D.G., Zedin, N.I. and Krym, I.A. AUTHORS:

Investigation of the Influence of Conditions of Rolling TITLE:

and Annealing on the Residual Stresses in Copper

(Issledovaniye vliyaniya usloviy prokatki i otzhiga na

ostatochnyyenapryazheniya v medi).

PERIODICAL: Tsvetnyye Metally, 1958, Nr.8, pp.57-60 (USSR)

In the course of rolling copper with high degrees of ABSTRACT: reduction the residual stresses may be eliminated on

account of the heat produced in the rolling. to measure the temperatures produced in rolling having

failed to give stable results the authors adopted the indirect method of comparing the extent of residual stresses

(lattice deformation) of copper after deformation with large reductions and after annealing. For investigating the influence of rolling factors on the residual stresses two For investigating the

strips were rolled from 3 to 0.5 mm, one in 3 passes with the minimal interval between passes, the other in ten with time for cooling between passes. After each pass specimens

were taken for X-ray and metallographic investigation and

Card 1/3

SOV/136-58-8-13/27

Investigation of the Influence of Conditions of Rolling and Annealing on the Residual Stresses in Copper.

determination of mechanical properties, including microhardness (Table 1). The residual stresses were found from the intensity of the (331) line (Fig.1). The details of the X-ray method used are given by S.O. Tsobkallo and V.V. Lath in "Trudy Leningradskogo Politekhnicheskogo instituta im. M.I. Kalinina" 1955, Nr. 180. Yu.P. Korolev participated The copper used contained 99.92% Cu, 0.002% Ni, 0.003% Pb, 0.002% Fe, traces of As, Sb, P, 0.07% 02. To find what annealing conditions were equivalent to rolling with large reductions per pass as regards removal of residual stresses, a similar investigation was made of specimens rolled with large and with small reductions per pass and annealed for one hour at 100, 200, 250, 300, 350 and 400°C (Fig.2). It was found that with large reductions the structure-modifying effect of the heat evolved is equal to that of annealing at 100°C. This is one of the reasons for the ability of copper to be rolled with large reductions without intermediate annealing. With small reductions the residual stresses cortinually grow with

Card 2/3

SOV/136-58-8-13/27 Investigation of the Influence of Conditions of Rolling and Annealing on the Residual Stresses in Copper.

increasing deformation. There are 2 figures and 2 tables.

1. Copper--Processing 2. Copper--Heat treatment 3. Rolling mills --Performance 4. Stress analysis

Card 3/3

SOV/136-59-6-16/24

Butomo, D.G., Ginaburg, N.G., Zedin, N.I. AUTHORS:

Sorgeyev. L.N.

Cracking of Aluminium Bronze During Tests in an TITLE:

Ammonia Atmosphere (Rastreskivaniye alyuminiyevoy

bronzy pri ispytanii v ammiachnoy atmosfere)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 84-85 (USSR)

Season cracking of brass in ammonia is due to ABSTRACT:

preferential attack of zinc by NH3. Practically no data are available on the possibility of failure of

aluminium bronze products by the same method. However,

some investigators note that aluminium bronze is

inclined to crack as a result of corrosion in the presence of internal stresses (Ref 3). Aluminium bronze

is comparable with brass both in structure and in

behaviour in ammonia atmosphere. Aluminium, like zinc,

must displace copper from its ammoniate solution. Thus,

it can be concluded that stressed aluminium bronze products will crack in an ammonia atmosphere in the same

way as brass. This assumption was verified with tubular specimens made from the alloy BrA5 containing 4.67% Al and

Card 1/4

807/136-59-6-16/24

Cracking of Aluminium Bronze During Tests in an Ammonia Atmosphere

94.92% Cu. Tests were carried out by keeping the specimens, which had been degreased and etched, in an exsiccator, the bottom of which was covered with a 20% ammonia solution, for 24 hours. After the tests, transverse cracks formed on the tube surfaces, which are characteristic of residual tensile stresses along the rolling direction of the tube (Fig 1). Even more convincing were the results of experiments with elastically deformed loops made from a strip of BrA5 alloy, 0.7 mm thick. From twenty specimens cut out of this strip, ten were annealed at 600°C for one hour, the other ten were tested in the work-hardened condition. Tests were carried out for 24 and 72 hours. After 24 hours, 50% of the annealed loops and 90% of the work-hardened ones had failed. After 72 hours, all the loops failed. The microstructure of the specimens which had failed in the ammonia tests was studied (Fig 2a and b). As can be seen, the propagation of cracks in both cases

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SOV/136-59-6-16/24

Cracking of Aluminium Bronze During Tests in an Ammonia Atmosphere

is not along the grain boundaries. In this behaviour the alloy BrA5 differs from brass, in which failure is intercrystalline, particularly if the alloy is in the annealed condition. Experiments were carried out in which the chemical composition of the corrosion products of the tubes of the BrA5 alloy was analysed after ammonia tests. The results prove that selective solution of aluminium occurs during corrosion of the stressed BrA5 alloy, similar to the selective solution of zinc in brass. It is concluded that, in general, stressed articles made of copper alloys in which the alloying elements are capable of displacing copper from its ammoniate solutions and forming solid solutions with copper, will fail when exposed to ammonia atmospheres if the concentration of the solid solution and the magnitude of the tensile stresses are sufficiently great. There are

Card 3/4

SOV/136-59-6-16/24

Cracking of Aluminium Bronze During Tests in an Ammonia Atmosphere

2 figures and 3 references, 2 of which are Soviet and 1 English.

Card 4/4

S/136/60/000/011/009/013 E193/E483

AUTHORS: Butomo, D.G., Zedin, N.I. and Firkovich, I.A.

TITLE: Anisotropy of Mechanical Properties of Chromized Bronze
BrKh 0.5 Strip

PERIODICAL: Tsvetnyye metally, 1960, No. 11, pp. 65-69

· 世界道:

TEXT: The object of the present investigation was to study the relationship between the form in which chromium is present in chromium bronze and the mechanical properties of this alloy after heavy deformation. The experimental alloy (in the form of hotrolled sheet, 13 mm thick) contained 99.08% Cu, 0.78% Cr (0.27% of which was in solid solution), 0.05% Fe and traces of Ni and Pb. Strips of this material were held for 1h at 700, 850 and 1000°C, after which half of the specimens were quenched from each of the annealing temperatures and the other half were furnace-cooled to Then all the heat-treated specimens (including room temperature. a sample of the starting, hot-rolled material) were cold-rolled in the direction normal to the direction of hot rolling, the total reduction in thickness attained (without any intermediate annealing) The cold-worked specimens were then annealed at being 95.4%. temperatures ranging from 200 to 900°C, after which they were Card 1/2

S/136/60/000/011/009/013 E193/E483

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Anisotropy of Mechanical Properties of Chromized Bronze BrKh 0.5 Strip

subjected to tensile tests (determination of the U.T.S. and elongation in the direction parallel and at 45° to the direction of cold rolling), deep drawing tests, metallographic examination and X-ray diffraction analysis. It was concluded that an increased content of chromium in solid solution, attained by quenching from 1000°C, inhibits the subsequent development of preferred orientation in heavily deformed chromium bronze and improves the mechanical properties of cold-worked and subsequently annealed material. Heavy (95%) deformation of this alloy (preliminarily annealed by heating to 700 to 800°C and furnace-cooled) followed by an annealing treatment, yields material characterized by pronounced recrystallization texture and by inferior mechanical properties. There are 4 figures and 6 Soviet references.

Card 2/2

28918

18.1220

5/136/61/000/010/002/003 E193/E435

AUTHORS:

Butomo, D.G., Zedin, N.I. and Suturin, G.I.

TITLE:

Development of a method of production of thin chromium bronze (alloy SpX (BrKh)) sheet with a finely-

crystalline structure

PERIODICAL: Tavetnyye metally, no.10, 1961, 69-76

Up till the middle of 1960, heat treated chromium bro ze sheet was produced by a method entailing a solution treatment at 980 to 1000°C, work-hardening by cold-rolling and ageing at 450°C. Some batches of material produced in this manner were found to have a coarsely-granular structure which caused frequent intercrystalline cracking during the subsequent forming operations. Hence the present investigation whose object was to determine the effect of various factors on the grain-size of chromium bronze sheet, treated to possess hardness not lower than 120 kg/mm2. grades of chromium bronze, containing 0.54, 0.66 and 0.79% Cr, Threewere used in the experiments which consisted in measuring hardness (at room temperature and at 600°C), grain-size, electrical conductivity and oxidation resistance of specimens quenched from 800, 850, 900, 950 and 1000°C, deformed by cold-rolling to 40, 50,

28948 S/136/61/000/010/002/003 B193/E435

Development of a method ...

60 and 70% reduction in thickness, and aged at 300, 400, 450 and The results obtained can be summarized as follows: 1) The grain-size of thermally and mechanically treated chromium bronze depends on its chromium content. Grain growth in alloys. containing 0.5 and 0.65% Cr, begins at 850 and 900°C respectively, whereas an alloy with 0.8% Cr retains its finely crystalline structure even at 950°C. 2) The quantity of chromium retained in solid solution was approximately 0.2% irrespective of whether the solution treatment was carried out at 1000, 950 or 900°C. 3) For practical purposes, a separate solution treatment can be replaced by rapid cooling after hot-rolling without a significant decrease in the quantity of chromium retained in solid solution, This method was used in a large scale trial in which 3 tons of 4 to 5 mm thick sheet was produced. The last hot-rolling operation was finished at 850 to 880°C after which the alloy was quenched from this temperature, 0.2 to 0.24% Cr being retained in solid solution. After cold-rolling (67 to 73% reduction in thickness) and ageing, the metal had the following properties:

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Development of a method ...

UTS - 45 to 49 kg/mm<sup>2</sup>; Brinell hardness - 120 to 148 kg/mm<sup>2</sup>; elongation - 14 to 17%; electrical conductivity - 65 to 71% of the electrical conductivity of copper. 4) Maximum hardness is attained by quenching from 1000°C and ageing at a temperature (400 to 450°C) depending on the preliminary cold deformation and duration of ageing. 5) The higher the degree of deformation after the solution treatment, the higher is the hardness after ageing; at the same time, a high degree of deformation brings about a decrease in the recrystallization (softening) temperature. 6) UTS of chromium bronze at high (600°C) temperatures is independent of the chromium content but decreases with decreasing temperature of the solution treatment. The optimum strength (UTS > 20 kg/mm<sup>2</sup>) at 600°C is attained after a solution treatment at 1000°C followed by cold-rolling to 70% reduction and ageing at 400°C 7) Electrical conductivity of chromium bronze is independent of its chromium content and varies (in the aged condition) between 75 and 80% of the electrical conductivity of copper. In the case of the Card 3/4

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Development of a method ...

solution treated material, electrical conductivity decreases with increasing temperature of the solution treatment, being respectively.

8) The thickness of the solution from 1000 and 900°C

8) The thickness of the surface layer in which chromium becomes oxidized at elevated temperatures depends on time at the given temperature. The thickness of the oxidized layer in an 8 mm thick strip held at 1000°C was 0.18, 0.26 and 0.59 mm after 15 min, 1 hour 4 tables and 2 Soviet references.

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Card 4/4

BUTOMO, D.G.; ZAMOTORIN, M.I.; ZEDIN, N.I.; SOMOVA, Ye.P.

Earing of copper strip. TSvet. met. 36 no.7:77-81 J1 \*63.

(Copper) (Rolling (Metalwork))

SLIOZBERG, S.K.; GINZBURG, S.K.; MIRKINA, L.M.; BUTOMO, D.G.; ZEDIN, N.I.

- Chromium bronze for electrodes of resistance welding machines.
Avon. sver. 18 no.5:32-34 My 165. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya (for Sliozberg, Ginzburg, Mirkina). 2. Zavod "Krasnyy vyborzhets" (for Butomo, Zedin).

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964210020-6"

L 23010-65 EWP(e)/EWT(m)/EWP(v)/T/EWP(t) JD/HM ACC NR. AP6007667 SOURCE CODE: UR/0413/66/000/003/0039/0039 AUTHOR: Butomo, D. G.; Zedin, N. I.; Sliozberg, S. K.; Sokolov, M. P. ORG: none TITLE: Alloy for electrodes of resistance welders. Class 21, No. 178426 [announced by the All-Union Scientific Research Institute of Welding Equipment (Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya)] SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, TOPIC TAGS: alloy, electrode, welding electrode, resistance welding ABSTRACT: An Author Certificate has been issued describing an alloy for electrodes containing copper and magnesium for resistance velders. In order to increase the strength of the electrode in resistance welding of aluminum and its alloys; the electrode alloy is supplemented with ~0.1% boron, the other compounds are magnesium (up to 0.30%) and the balance is copper. SUB CODE: 11, 13/ SUBM DATE: 04Jan65/ Card 1/1 plan UDC: 621.791.763.037.2

ALEKSEYEV, N.S.; BELYAYEV, A.P.; BUGAREV, L.A.; BUTOMO, D.G.; VASIL'YEV,Z.V.; VERIGIN, V.N.; VOROB'YEV, G.M.; GAYLIT, A.A.; GOL'SHTEYN, P.M.; GOKHSHTEYN, M.B.; ZHOLOBOV, V.V.; ZEDIN, N.H.; IVANOV-SKOBLIKOV, W.I.; KUTEPOV, Ya.V.; LANDIKHOV, A.D.; MARAYEV, S.Ye.; MILLER, L.Ye.; OL'KHOV, N.P.; PERLIN, I.L.; POSTNIKOV, W.M.; ROZOV, M.W.; CHERNYAK,S.N.; CHUPRAKOV, V.Ya.; TSENTER, Ya.A.

Vladimir Oskarovich Gagen-Torn; obituary. TSvet.met. 27 no.5:67-68 S-0 '54. (NIRA 10:10) (Gagen-Torn, Vladimir Oskarovich, 1888-1954)

VRUBEL, F.; VITEK, J.; ZEJDA, V.

Reproperitoneal liponas. Rozhl.chir. 39 no.11:748-752 N'60.

1. I. chirurgicka klinika v Brne, prednosta prof. dr. J.Podlaha. (RETROPERITONEAL SPACE neopl) (LIPOMA surg)

ZEDL MAYA, KURT

HUNGARY/Cultivated Plants - Technical Oleaceae, Sugar Plants

M - 7

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1678

Author : Kurt Zedl mayr Inst : Not Given

: Role of the Polyploid in the Selection (of Sugar Beets). Title

Orig Pub : Magyar tud. akad. agrartud oszt. kozl., 1956, 9, No 1-3,

177-193, hozzas zolasok 194-215

Abstract : In order to obtain polypolid beets, colchicine was applied to the top bud of young plants; in a particular bud fissure, every day for two weeks, a 0.2% aqueous colchicine solution was dropped in. The plants treated showed deformed foliage formation. With cooperation of selectioneers and cytologists, a hybrid triploid beet was created. Tetraploids cannot be farmed, since they are inferior in yield to the diploid varieties. The solution of the problem could only be achieved by mesns of triploid hybrids, by way of freely selective crossing, with a careful choice of partners, and with increased heterosis. Examples are cited showing that polyploidation is characterized by definitely directed and progressive

Card : 1/2

HUNGARY/Cultivated Plants - Technical Oleaceae, Sugar Plants

M-7

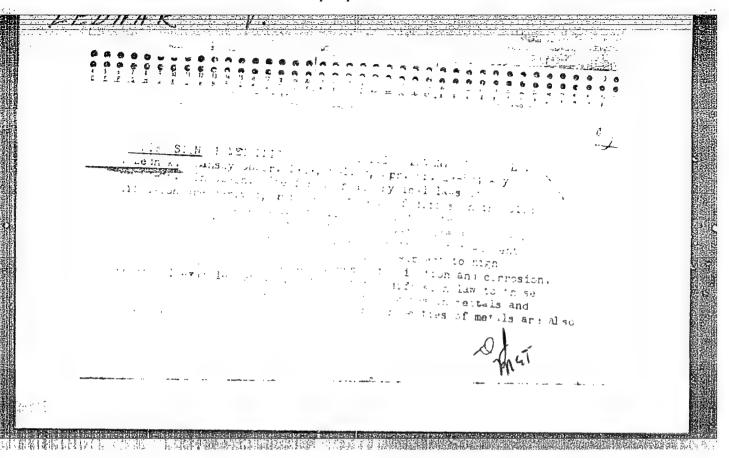
Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1678

anatomical, morphological and biological changes. It is stressed that action of colchicine brings about the breaking down of heredity, the formation of more flexible initial : specimens, and the elimination of the crossing difficulties.

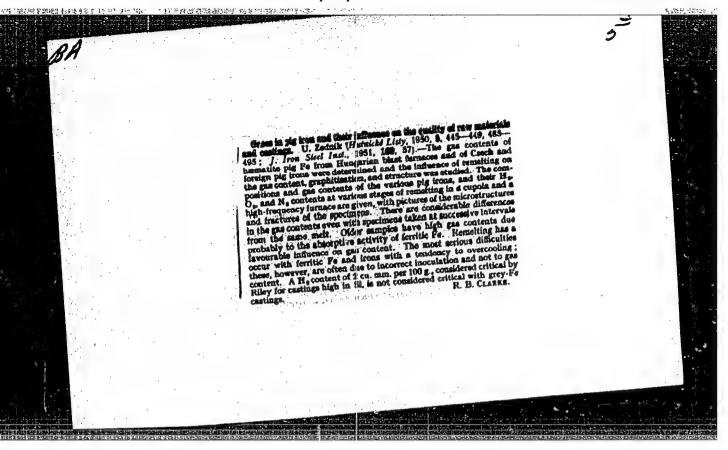
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# The navigation system Transit. Letecky obzor 6 no.11:363-365 '62.



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### "APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001964210020-6

ACC NR. AP602h772 SOURCE CODE: CZ/OO1A/65/000/007/0245/0246

AUTHOR: Zednik, Robert; Zitko, Frantisek

ORG: none

TITLE: Automatic recording of the responses of semiconductor devices and means of the BAK II recorder

SOURCE: Sdelovaci technika, no. 7, 1965, 245-246

TOPIC TAGS: recording equipment, semiconductor electron tube/BAK II recording equipment

ABSTRACT: The article describes the principle of automatic recording with the BAK II for determining the real as against the rated parameters of semiconductors to be used in equipment being designed. The principle can also be used to determine the parameters of electron tubes, etc. Orig. art. has: 11 figures. [JFRS]

SUB CODE: 14, 09 / SUEM DATE: none

ZEDNIK, V.

Hagnetic properties of cast steel. (to be contd.) p. 193 (Spevarenstvi. Praha. Vol. 2, no. 7, July 1954)

SO: Monthly List of East European Accessions, (EFAL) LC, Vol. 4, No. 6, June 1955, Uncl.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964210020-6"

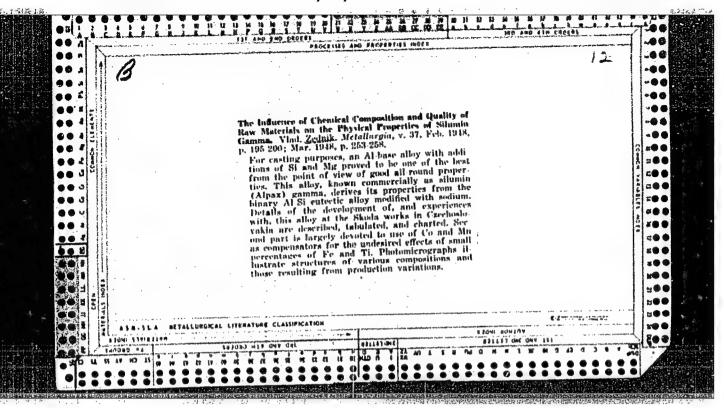
ZEDNIK, W.

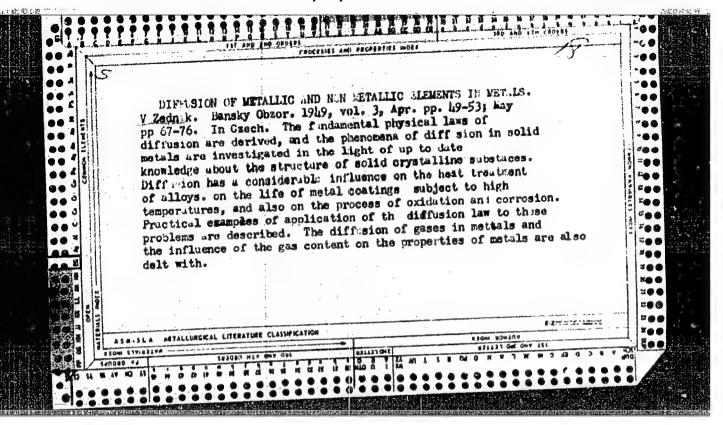
ZEDNIK, V.

Magnetic properties of cast steel. Conclusion) p. 231 (Slevarenstvi. Prana. Vol. 2, no. 8. Aug. 1954) SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

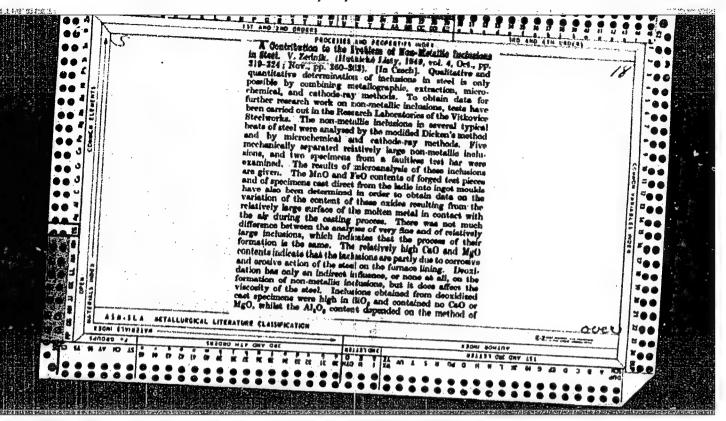
ZEDNIK, V., KADERAVEK, Z.
"Fracture Mechanism in Pearlite," p 211.
(Hutnicke Listy, Vol.6, No.5, May 1951, Brno.)

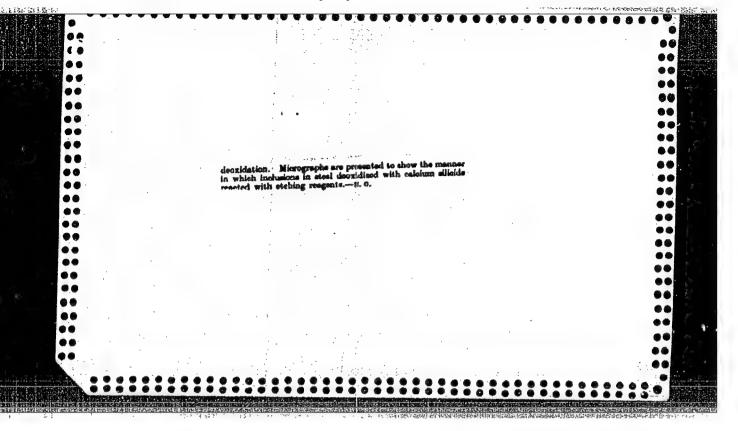
SO: Monthly List of East European Accessions, Vol.2, No.9, Library of Congress, September 1953, Uncl.





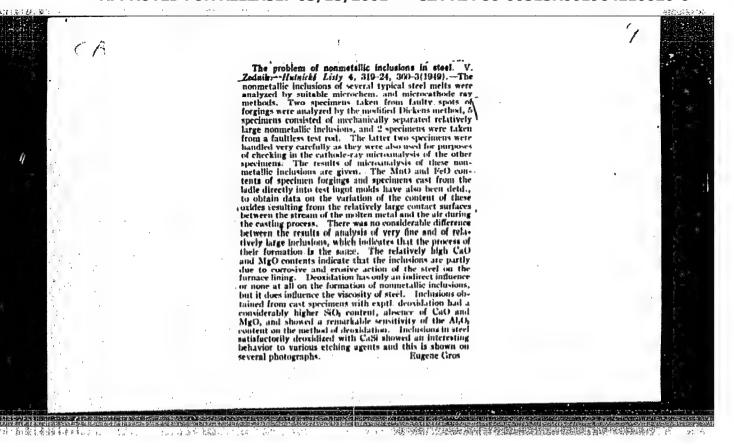
	Microphotos steel deox		ke Li	CZZCHOSLOVARLI	Control of the Contro
	Microphotographs shows teel devided by a steel decaddized by a	phice cter cter cial	sty" Vol 1	CZECHOSLOVAKIA/Netals - "Problem of Inclusions Dr Eng, 35 pp	
	dd b	method nd amou is ne in re ilting	V, No	Steel  Deoxidation  in Steel," P	
	have of incorrance calci	3 K B 0 E	L.An	" Prof V	
	have considerable on of inclusions in calcium-silicon.	now required to f inclusions in on deoxidation on to sulfur content ass and erosive	specialized	Nov 49	

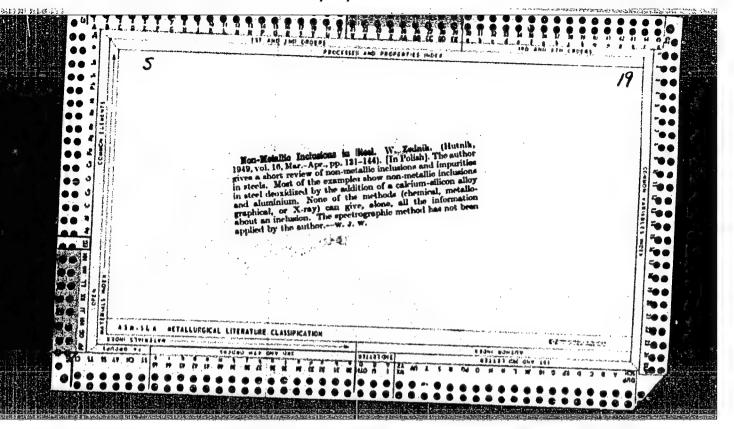


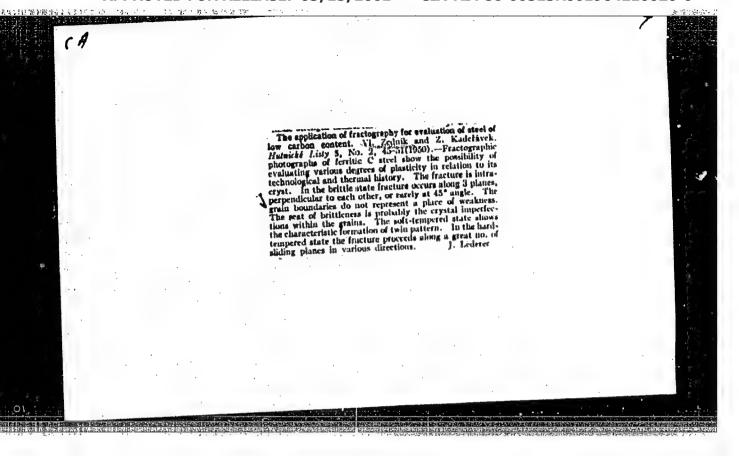


### "APPROVED FOR RELEASE: 03/15/2001

### CIA-RDP86-00513R001964210020-6

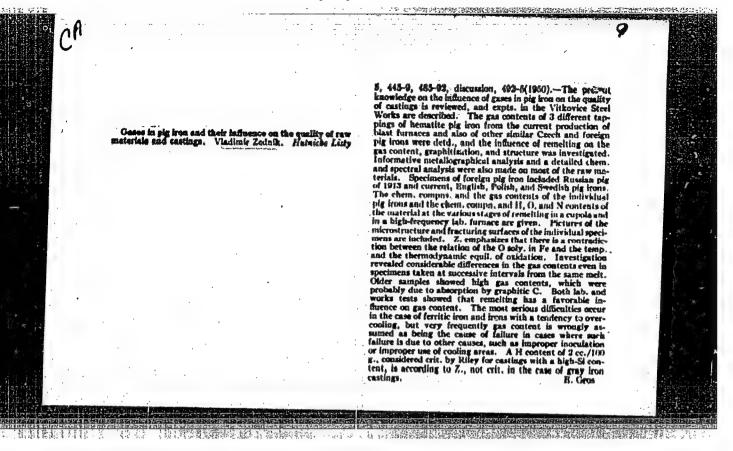






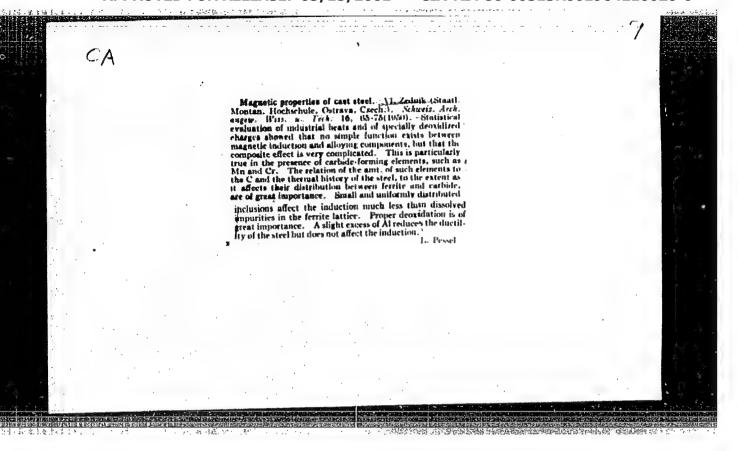
### "APPROVED FOR RELEASE: 03/15/2001

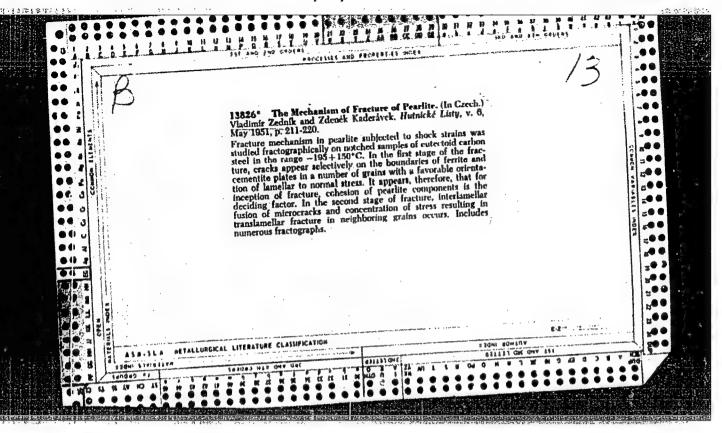
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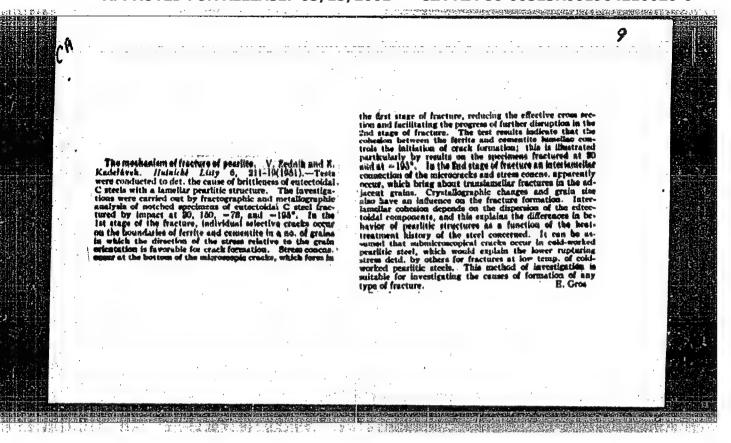
### CIA-RDP86-00513R001964210020-6





### "APPROVED FOR RELEASE: 03/15/2001

### CIA-RDP86-00513R001964210020-6



ZEDNICEK, J.

Filter texture for ceramic production. (To be contd.) p.145. (Sklar A Kermik, Vol. 7, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

ZEDNICEK, J.

Filter texture for ceramic production. (Conclusion) p.201. (Sklar A Kermik, Vol. 7, No. 7, July 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

事员的 1964年,为数据等

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and

H-13

Their Application, Ceramics, Glass, Binding Materials. Concretes.

Abs Jour

Ref Zhur - Khimiya, No 17, 1958, 58164

Author

Svedova Jarmila, Zednicek Jaromir

Inst Title

Filter Fabrics for Ceramics.

Orig Pub

Sklar a keramik, 1957, 7, No 7, 201-202.

Abstract

Rules for the storage, drying, washing and emding of filter linens of synthetic fiber (LSF) for ceramic plants are cited. ISF should be preserved in compartments with a relative air humidity of ~ 70%; protected from the direct action of sun and ultra-violet rays; not dried after washing; and in case of necessity, the temperature fo drying must not be > 200; do not use brushes during washing; mond LSF only with synthetic

**Gard 1/2** 

Mechanian of Franture of Pospilita, IV. Zednik and Z. Kadensvak. ( Hunicke Listy, 1951, 6, bay, 211-220). (In Casch).

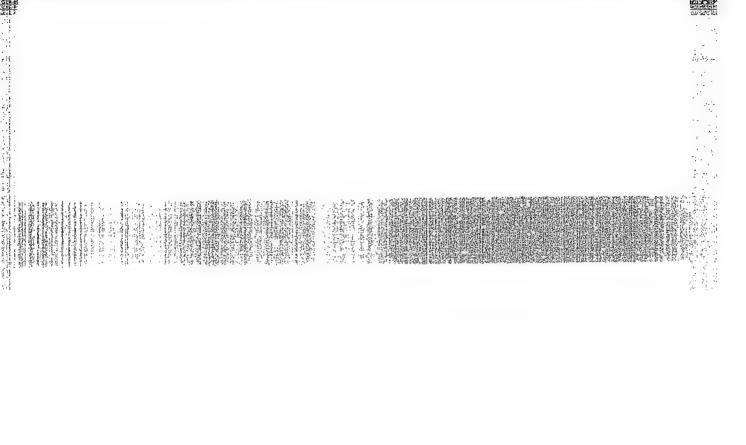
Fracture mechanisms in peculite subjected to impact have been studied fractor. graphically on notched samples of entectoid cabon steel in the temperature range of ... 195 to \* 150°. In the first stage of fracture, cracks arise selectively at the boundaries of the ferrito-comentate landles in a number of grains having landles favourably extented with respect to the bounds stresses acting on them. It appears that the start of a fracture is conditioned by the atrought of the boundary cohesion between the two phases. The stress concentrations in the numerous microcracks as formed facilitate the progress of the second stage in which these cracks extend and coalesce, and which proceeds preferentially across the grains and in directions other than parallel to the landless. Crystallographic defects and grain sishave observable effects on the character of the spread of fractures. Fractical uses of fracturely are reveixed.—P. F.

Presdicto cruice of ipping

ZEDNIK, VL.

Zkouseni kovu. Rukopis pro vyd. pripravil R. Sejnoha. (Vyd. 1.) Praha, Statni nakl. technickle literatury, 1957. 199 p. (Metal testing; a university texbook. lat ed. illus., bibl., diagrs., graphs, tables)

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

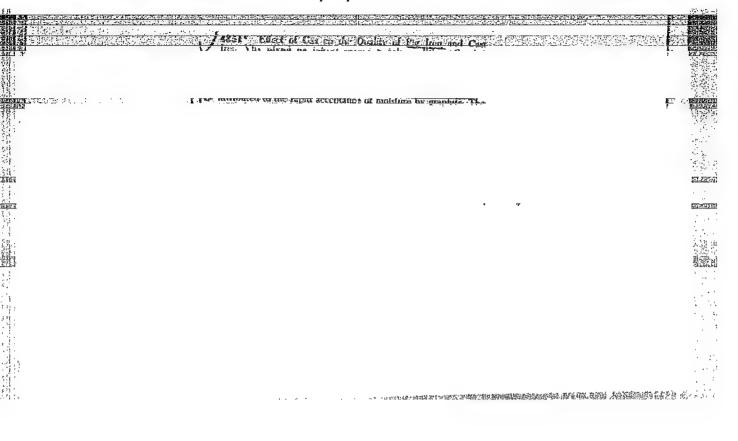


ZEDNIK. V.

Nemec, J. Testing impact ductility. p. 766. STROJIRENSTVI, Prague, Vol. 4, no. 10, Oct. 1954.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964210020-6"

SO: Monthly List of East European Accessions, (EEAL), LC, Vol.5, No. 6, June 1956, Uncl.



ZEDNIK, Zdenek, inz.

Tachogenerator, its design, properties and use. Automatizace 12 no.5:212-215 8 Ag 162.

1. Moravskoslezske elektrotechnicke zavody, n.p., Nachod.

HEJNAL, J.; HRDLICKA, Z.; SCHINDLER, J.; CERVINKA, F., Technicka apoluprace:
Z. Divis, J. Hnatek, M. Hubkova, Z. Linkova, L. Rablova, H. Tazilova,
H. Vidmarova, A. Zednikova.

Antibiotics in preoperative preparation of the large intestine. Rozhl. chir. 38 no.8:507-515 Aug 59.

1. Ustav klinicke a experimentalni chirurgie v Prase Ustav mikrobiol. a epidemiol. KU v Praze.

(ANTIBIOTICS, ther.) (COION, surg.)

 ZEECOFER, O. I., Engr

USE/Electricity- Transmission Lines Hydroelectric Power Stations

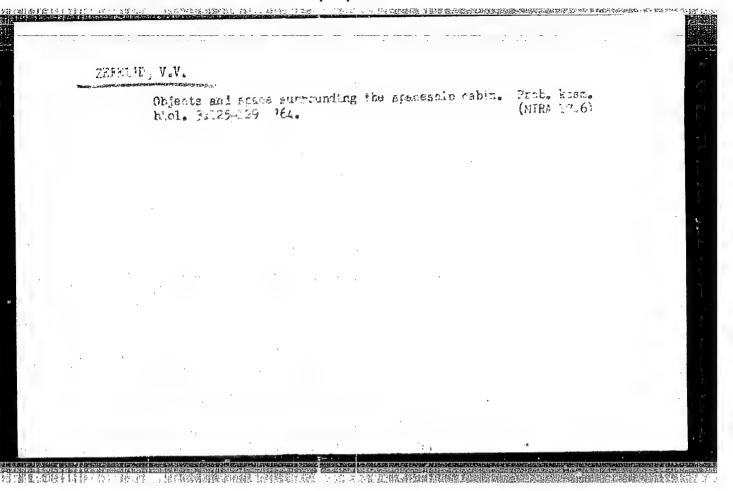
Nov 50

Super-long-Distance Power Linco, M. Teloviev

"Hauka 1 Zhien's No 11, pp 42, 43

The let operating model of the Keybyshev hydroelec power station, consisting of 2 turbines, 2 generators, and a long-distance transmission line (represented by coils and capacitors), has been built at the hydroelec Power Eng Lab, (director - Fast T. L. Zolotarev, Dr Tech Sci) of the Moscow Power Eng Inst. The work was directed by V. A. Venikov, Cand Tech Sci, and A. V. Ivanov-Swienskiy, Cand Tech Sci, and Engineers L. S. Lifshitz and O. I. Zeegofer participated. The 2d model, when completed, will be connected into the Moscow Power System in order to study the operating conditions of the Emphyshev station more thoroughly.

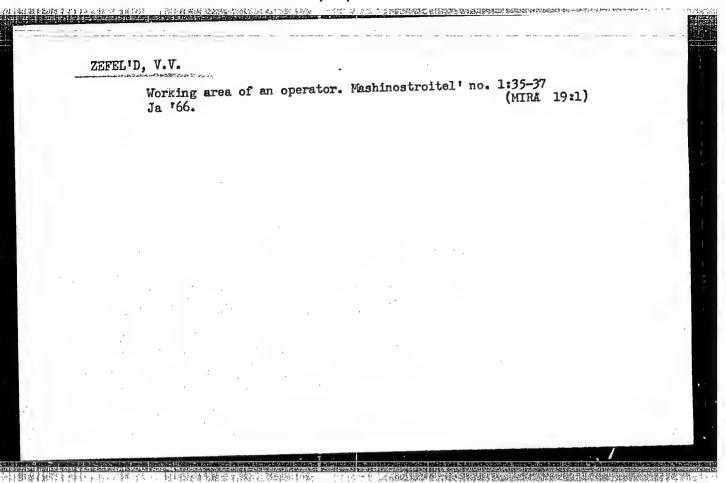
PA 221739



VENDA, V.; ZEFEL'D, V.

Rodesigning of operators' stations. Tekh. est. no.6:15-17 Je '65. (MIRA 18:8)

l. Vaesoyuznyy nauchno-issledovatel skiy institut tekhnicheskoy estetiki.



ZEFFER, Jeno, dr.

Data on the course of deliveries which begin more than 24 hours after rupture of the ammion. Magy, noorv. lap. no.5:316-319 \$ '61.

1. A Szovetseg utcai Korhaz Rendelointezet Szuleszet Nogyogyaszati osztalyanak kozlemenye.

(LABOR) (AMNION)

ZEFFER, Jeno, dr.

Data on the problem of the prevention of thromboembolism following gynecological interventions and delivery. Orv. hetil. 103 no.20: 926-929 20 My 162.

1. Szovetseg-utcai Korhaz, Szuleszeti-Nogyogyaszati Osztaly.

(THROMBOEMBOLISM prev & control) (PUERPERIUM compl)
(GENITALIA FEMALE surg)

#### "APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-

CIA-RDP86-00513R001964210020-6

HUNGARY

FORGACS, Jozsef, Dr., RAGALYI, Geza, Dr., SANDOR, Tibor, Dr., and ZEFFER, Jeno, Dr. Tetenyi Road Hospital, Obstetrical and Gynecological Department (Tetenyi Uti Korhaz Szulo es Nobeteg Osztaly), and Szovetseg Street Hospital, Obstetrical-Gynecological and X-ray Department (Szovetseg Utcai Korhaz Szulo-Nobeteg es Rontgen Osztaly), both operated by the Capital Council (Fovarosi Tanacs) in Budapest.

"The Significance of Chromocystoscopy and Secretion Urography in the Preparation of Gynecological Patients for Surgery"

Budapest, Orvosi Hetilap, Vol 107, No 24, 12 Jun 1966, pp 1115-1117.

Abstract: The authors conducted chromocystoscopy and secretion urography in 281 patients prior to elective gynecological surgery. In 6% of the cases the findings contributed to better determination of the surgical procedure to be employed and to better understanding of the patient's recovery course. Thus, chromocystoscopy should be considered a routine operation prior to gynecological surgery and secretion urography should be performed in selected cases prior to gynecological surgery. 8 references, including 1 Hungarian and 7 Western.

1/1

48 -

#### HUNGARY

ZEFFER, Jeno, Dr., Szovetseg Street Hospital, Department of Obstetrics and Gynecology (Szovetseg Utcai Korhaz, Szulo-Nobeteg Osztely) [Location not given] (Physician-in-Chief: FORGACS, Jozsef, Dr.).

"Coitus Injury to the Posterior Vagina Penetrating the Peritoneum"

Budapest, Orvosi Hetilap, Vol 107, No 26, 26 Jun 1966, pp 1238-1239.

Abstract: The author described the case of a married 18-year old female patient suffering from penetration of the peritoneum sustained in the course of injury during coltus performed in the position of extreme flection. It was noted on the basis of clinical examination that the injury was caused by the position occupied in the course of coltus rather than by the disproportionate sizes of the reproductive organs of the partners involved. 12 references, including 6 Hungarian and 6 German.

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- 85 -

#### APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964210020-6

HUNGARY

ZEFFER, Jeno, Dr; Szovetseg Street Hospital, Obstetrical-Gynecological Ward (chief physician: FORGACS, Jozsef, Dr) (Szovetseg Utcai Korhaz, Szulo-Nobeteg Osztaly), Budapest.

"Endometriosis Externa in the Scar of an Episiotomy."

Budapest, Orvosi Hetilap, Vol 107, No 44, 30 Oct 66, pages 2098-2099.

Abstract: [Author's Hungarian summary] A case of endometriosis externa is described which was formed in the scar left by a previous episiotomy. 2 Hungarian, 3 Western references.

AUTHOR: Zefirov, A.P. and Nevskiy, B.V.

136-4-21/23

TITIE: Research and design organisations of France. (Issledovatelskie i proektnye organizatsii Frantsii.)

PERIODICAL: "Isvetnye Metally" (Non-ferrous Metals), 1957, No.4, pp. 88 - 93 (U.S.S.R.)

ABSTRACT: The authors visited organisation in France in 1956 and in this article they describe some of these: the research laboratory of Minerais et Métaux, the testing station and design office of the PIC firm, the research aboratories and design office of SECPIA. The special features of these organisations are given as their broad scope, the fact that they work on a contract basis and the volume of work which they do for non-French interests.

There are 6 figures.

AVAILABLE:

Card 1/1

#### CIA-RDP86-00513R001964210020-6 "APPROVED FOR RELEASE: 03/15/2001

AUTHORS: Zefirov, A.P. and Nevskiy, B.V. 136-7-20/22

The production of pure titanium dioxide and titanium tetrachloride in France. (Proizvodstvo chistoy dvuokisi titana i chetyrekhkhloristogo titana vo Frantsii). TITLE:

PERIODICAL: "Tavetryye Metally", 1957, No.7, pp.91-93 (USSR).

The authors give an account of the methods and installations for the production of pure titanium dioxide and tetrachloride which they recently saw in France and dis-

cuss some opinions by French technologists. 1/1

There is 1 figure.

Library of Congress AVAILABLE:

ZEFIROV, A.P., professor, doktor tekhn. nauk, red.; IVANOV, G.F., kand. tekhn. nauk, red.; NEVSKIY, B.V., kand. tekhn. nauk, red.; SAGURO, M.A., red.; MAZEL', Ye.I., tekhn. red.

[Transactions. Selected reports by foreign scientists] Trudy. [Izbrannye doklady inostrannykh uchenykh] Moskva, Izd-vo Glav. uprav. po ispol'zovaniiu atomnoi energ. pri Sovete Ministrov SSSR. Vol.7. [Technology of atomic raw products] Tekhnologiia atomnogo syr'ia. Pod obshchei red. A.P. Zefirova. 1959. 656 p. (MIRA 1417)

1. Vtoraya mezhdunarodnaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Zheneva, 1958.

(Uranium) (Thorium)

BOCHVAR, A.A., akademik, obshchiy red.; VINOGRADOV, A.P., akademik, obshchiy red.; YEMEL'YANOV, V.S.; ZEFIROV, A.P., doktor tekhn. nauk, obshchiy red.; ZUBOV, A.I., red.; ZYEHEV, G.L., red.; PEREYERZEV, V.V., red.; PCHELINTSEVA, G.M., red.; MAZEL', Ye.I., tekhn.red.

[Proceedings of the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958] Trudy Vtoroi mezhdunarodnoy konferentsii po mirnomu ispol'zovaniyu atomnoy energii, Zheneva, 1958. (Doklady sovetskikh uchenykh) Moskva, Izd-vo Glav.uprav.po ispol'zovaniiu atomnoi energ. pri Sovete Ministrov SSSR. Vol.3. [Nuclear fuel and reactor metals] IAdernoe goriuchee i reaktornye metally. 1959. 670 p. (MIRA 12:11)

1. International Conference on the Peaceful Uses of Atomic Energy, 2d, Geneva, 1958. 2. Chlen-korrespondent AN SSSR (for Yemel'yanov).

(Ancless fuels)

ZEFIROV, A.P.; HAKOVETSKAYA, M.A.; ZARGAROVA, M.I.

Present state of lithium technology and its industrial use.

Het. i metalloved. chist. met. no. 2:159-171 '60. (KIRA 13:12)

(Inthium--Metallurgy)

S/089/60/008/06/04/021 B006/B063 82305

21.3200

AUTHORS: Laskorin, B. N., Zefirov, A. Pr., Skorovarov, D. I.

TITLE: Extraction of Uranium From Solutions and Slimes

PERIODICAL: Atomnaya energiya, 1960, Vol. 8, No. 6, pp. 519-529

TEXT: The present paper gives data on the extraction of uranium from solutions and slimes of sulfuric, nitric, hydrochloric, and phosphoric acids by means of the esters of various acids, liquid cationites, and anionites. The authors discuss mainly methods which can be used in industry. They first describe the extraction of uranium from solutions. They studied the extraction with various organic compounds (e.g. alcohols, ethers, ketones, diketones, and their halogen derivatives, esters of various acids, aliphatic amides, etc.). Alcohols, ethers, and carboxylic acid esters extract uranium from nitric acid solutions. The selectivity of the acetic acid esters increases with their solubility in water, as may be seen from Table 1. The selectivity of the extracting agents decreases in the following order: carboxylic acid

Card 1/3

Extraction of Uranium From Solutions and Slimes

S/089/60/008/06/04/021 B006/B063 82305

esters, ethers, alcohols (Table 2). Fig. 1 shows the salting-out effect of  $Ca(NO_3)_2$  in the extraction of uranium by means of isoamyl acetate and dimothyl phthalate. Following this, the authors discuss the extraction by means of phosphoric acid esters. Trialkyl phosphates are well-known selective solvents for the extraction of uranium. The partition coefficient Kp which describes the extractibility, rises with an increase in the hydrocarbon radical up to C5 - C6, after which it drops exponentially. Triaryl phosphates practically do not extract uranium. The selectivity of trialkyl phosphates rises with increasing molecular weight of the extraction solvent. This may be seen from Table 3 which shows the dependence of  $K_{\mathbf{p}}$  of uranium on the nature of the hydrocarbon radicals of the phosphoric acid esters. The technological process of the extraction of uranium from nitric acid desorption solutions is schematically represented in Fig. 3. The authors next discuss the extraction of uranium by means of diisoamyl esters of methyl phosphinic acid  $[i(C_5H_{11}O)_2POCH_3]$  (DAMFK). Figs. 4 and 5 show the dependence of  $K_p$  on the content of hydrochloric acid and phosphoric acid of the solution from which uranium is extracted. Analogously, the

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#### "APPROVED FOR RELEASE: 03/15/2001 CIA-

CIA-RDP86-00513R001964210020-6

Extraction of Uranium From Solutions and Slimes

S/089/60/008/06/04/021 B006/B063 82305

authors discuss the extractibility of trioctyl phosphinoxide  $(C_8H_{17})_3PO$ , dialkyl phosphites  $[(RO)_2P(OH)]$  with hydrocarbon radicals from  $C_4$  to  $C_8$ , alkyl phosphoric acids, and amines. Alkylamines and

alkyl-arylamines with long chains extract uranium from sulfuric acid solutions and concentrated hydrochloric and nitric acid solutions similarly as ion-exchange resins. The Kp values for U VI are given in Table 4 for numerous amines. Fig. 8 gives the technological scheme for a special case. The last part of the present paper treats the extraction of uranium from ore slimes. The losses of the extraction solvent are discussed, and it is shown that these losses decrease with increasing content of solid substances in the ore slimes or pastes (Fig. 9). The extraction of uranium from an ore paste is schematically shown in Fig. 10 and described. There are 10 figures, 4 tables, and 7 references: 6 Soviet and 1 Yugoslavian.

SUBMITTED: July 18, 1959

Card 3/3

X.

Production and use of beryllium. Het, i metalloved, chist. met.
no. 2:319-333 '60. (MIRA 13:12)

(Beryllium)

ZEFIROV, A.P., prof., doktor tekhn. nauk; NEVSKIY, B.V.; IVANOV, G.F.; VORONOVA, A.I., red.; MAZEL', Ye.I., tekhn. red.

[Plants for the processing of uranium ores in capitalist countries] Zavody po pererabotke uranovykh rud v kapitalisti-cheskikh stranakh. Pod obshchei red. A.P.Zefirova. Moskva, Gosatomizdat, 1962. 370 p. (MIRA 15:7) (Uranium industry)

VERYATIN, U.D.; MASHIREV, V.P.; RYABTSEV, N.G.; TARASOV, V.I.; ROGOZKIN, B.D.; KOROBOV, I.V.; ZEFIROV, A.P., doktor tekhn. nauk, red.; MURADOVA, A.A., red.

[Thermodynamic properties of inorganic substances; a mamual] Termodinamicheskie svoistva neorganicheskikh veshchestv; spravochnik. Moskva, Atomizdat, 1965. 459 p. (MIRA 18:12)

AMA024184

BOOK EXPLOITATION

S/0793

Laskorin, B. N.; Zefirov, A. P.; Skorovarov, P. I.

Extraction of uranium from solutions and pulps (Ekstraktsiya urana iz rastvorov i pul'p) Moscow, 1960. 24 p. illus., biblio. No. copies printed not given. (At head of title: Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR)

TOPIC TAGS: uranium extraction, uranium ore

PURPOSE AND COVERAGE: Data are presented concerning the extraction of uranium from the sulfate, nitrate, hydrochloric, and phosphate solutions and pulps most frequently encountered in the hydrometallurgy of uranium. Esters of carboxylic, phosphoric, and phosphinic acids, and liquid cation and anion solutions are investigated as extraction agents that are most convenient for industrial application. The process of extracting uranium from thick ere pastes is described for the treatment of high-grade uranium ores.

Coro 2

SERPOV, Boris Ivanovich; BARASHKOV, Nikolay Aleksandrovich; BYKHANOVA, Etoliya Anatol'yevna; ZEFIROV, Igor' Vasil'yevich; ROSHCHIN, Valentin Alekseyevich; NESTEROV, P.A., inzh., retsenzent; SHAKHOV, A.I., inzh., retsenzent; DOBROLENSKIY, V.P., nauchnyy red.; SMOLEV, B.V., red.; KOROVENKO, Yu.N., tekhn. red.

[Laying of a ship hull from scale drawings]Razmetka pri masshtabnoi razbivke korpusa. [By]B.I.Serpov i dr. Leningrad, (MIRA 15:7) (Laying off (Shipbuilding)) (Photomechanical processes)

SERFOV, B.I., kand.tekhn.nauk; ZEFIROV, I.V., inzh.

Photographic projection apparatuses for the marking-off of ship hull plate material. Sudostroenie 28 no.2:61-63 F '62.

(MIRA 15:3)

(Lantern projection) (Shipbuilding-Equipment and supplies)

ZEFIROV, lgor' Vasil'yevich; NIKONOV, Sergey Nikolayevich;
PANKRATOV, Vledimir Petrovich; CRLOV, N.L., rabochtyrazmetchik, retsenzent; RIMMER, A.I., inzh, retsenzent;
SHAKHOV, A.I., inzh., nauchn. red.; LISOK, E.I., red.

[Laying off in shipbuilding] Sudovaia razmetka. Leningrad,
Sudostroenie, 1965. 411 p.

(MIRA 18:8)

## ZEFIROV, L.N.

Effect of partial surgical exclusion of the pancreas on some electrocardiographic indices in dogs. Biuleksp.biol.i med. 54 no.11:46-50 N '62. (MIRA 15:12)

1. Iz kafedry normal'noy fiziologii (zav. - prof. I.N.Volkova)
Kazanskogo meditsinskogo instituta. Predstvlena deystvitel'nym
chlenom AMN SSSR A.V.Lebedinskim.
(ELECTROCARDIOGRAPHY) (PANCREASSINGERY)

ZEFIROV. L. D.

UDOR/Medicine - Physiology FD 2

Card 1/1

Author : Zefirov, L. N. and Kibyakov, A. V.

Title : Role of acetylcholine in the mechanism of tonic contraction of

skeletal muscles

Periodical: Fiziol.zhur. 2, 183-190, Mar/Apr 1954

Abstract : After direct current was applied to the nerve of an isolated nerve

second: this produced a slow tonic contraction which started after an appreciable latent period, slowly increasing to a plateau of low amplitude and followed by very slow relaxation after the end of stimulation. Removal of the pancreas abolished this tonic contraction within 6 to 9 days. Subcutaneous injection of acetylcholine (0.5 cc of a concentration 1:10,000) after the 3rd post-operative day and immediately before the experiment had a compensatory effect in that the contraction was obtained in the pancreas-ectomized animals. It

muscle preparation in frogs it was stimulated 7 to 15 times per

was concluded that removal of the pancreas interferes with the synthesis of acetylcholine. A total of 400 experiments were performed.

Four illustrations. Thirteen Soviet references are cited.

Institution : Chair of Normal Physiology, Medical Institute, Kazan'

Submitted : June 16, 1953

ZEFIROV. L.N.; POLETAYEV, G.L.

Some electrophysiological data on the contraction of the anterior abdominal wall (défense musculaire). Biul.eksp.biol. i med. 41 no.3: 13-18 Mr 156. (MLRA 9:7)

1. Iz kafedry normal'noy fiziologii (zav.-chlen-korrespondent AMN SSSR prof. A.V.Kibyakov) Kazanskogo meditsinskogo instituta.

Predstavlena deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim.

(ABDOMEN, musc. electromyography of anterior abdom. musc. in dogs)
(ELECTROMYOGRAPHY anterior abdom. musc. in dogs)

USSR/Human and Animal Physiology. Neuro-Muscular Physiology.

T

Abs Jour: Re? Zhur-Biol., No 8, 1958, 36783.

Author : Zefirov, L.N., Kibyakov, A.V.

Inst :-

Title

: On the Mechanism of Postural Tetanic Contractions and

Their Evolution into Tetany.

Crig Pub: Fiziol zh. SSSR 1956, 42, No 6, 470-476:

Abstract: Stimulation of the peripheral end of the femoral nerve of a cat with a weak current (frequency 10 imp/sec) produces synchronic posture tonic contraction of the isolated quadriceps muscle. With intensification of the stimulation, the synchronic contraction passes into dentate tetany of smaller amplitude. Further increase of the stimulation intensifies the amplitude of the tetany. This is evidence of low lability of the neuro-

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Abs Jour: Ref Zhur-Biol., No 8, 1958, 36783.

muscular preparation in postural-tonic contractions and of spasmodic increase of lability, surpassing the frequency of stimulation, in the transition to tetanic contraction. As a result of the sharp increase of lability, a temporary pessimum appears, different from the Vvcdenski pessimum; under circumstances of low frequency stimulation the conditions for superpostion of the muscle contractions become less favorable as a result of their more rapid succession. Polarization of the nerve distally from the stimulating electrodes produces a lowering of lability, which allows the occurrence of postural-tetanic contraction under all intensities of stimulation. In a series of cases an increase of the amplitude of contractions during the transition from tetany to tonic contraction was observed under these

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Abs Jour: Ref Zhur-Biol., No 8, 1958, 36783.

circumstances. The transition into tetany under conditions of slight polarization becomes more difficult, and under condition of intense polarization it fails to occur altogether. In disturbances of acetylcholine synthesis (within 5-9 days prior to the experiment the tail of the pancreas is removed and its duct is ligated) it is easy to obtain postural-tonic contraction with slow rhythmic stimulation and within a wide range of the force of stimulation. In a series of cases serrate tetany was observed with low frequencies. With intensification of the stimulation the postural-tonic contraction passes into smooth tetany without decrease of the amplitude of contractions and without the appearance of the serrate type of tetany. This proves the participation of acetylcholine in the changes in

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Abs Jour: Ref Zhur-Biol., No 8, 1958, 36783.

lability during the transition from tonic to tetanic activity. These observations contradict the hypothesis of Sharipova R.R. and Zhukov, E.K. (Fiziol. zh. SSSR, 1954, 40, 445) of the existence of a special apparatus controlling postural-tonic contractions.

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USSR/Human and Animal Physiology. Nerve and Muscle Physiology.

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55948.

Author : Zefirov, L.N., Kibyakov, A.V., Orlov, P.S.

Inst

Title : The Role of Acetylcholine in the Mechanism of the

Skeletal Muscles' Reflectory Tonus.

Orig Pub: Fiziol. zh. SSSR, 1956, 12, No 11, 971-976.

Abstract: A spinocortically dissected frog with exposed sciatic nerves was suspended and the nervation height of the digits was noted. After the nerve was severed, the paw which has lost its reflectory tonus became 4.5-14.0 mm longer. On the 4th to 9th day the removal of the pancreas, which caused an impairment to the formation of acetylcholine (I) in the organism, clearly lowered and even annihilated the tonus of

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USSR/Human and Animal Physiology. Nerve and Muscle Physiology.

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55948.

the muscles (at which time the difference in the length of the paws before and after the severance of the nerve equaled 0.2-0.3 mm). When (I) was administered in order to compensate this impairment, the tonus was completely restored. The flexor reflex was determined by using a fibular nerve specimen, a semitendinosous. On the 4th to 9th day after the removal of the gland, the diapason of effective frequencies was greatly constricted and the nerve centers' reflectory responses diminished. Also, the reflectory after-effects of contractions disappeared (on the 7th day). Thus, (I) should be considered as a factor which determines the functional state of the central nervous system to a great

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Abs Jour: Ref Zhur-Diol., No 12, 1958, 55948.

extent, and which promotes lability and functional stability of the nerve centers.

Card : 3/3

#### ZEFIROV, L.N.; SHAPIRO, Yu.G.

Tetanic single contractions of the neuromuscular apparatus in the frog following excision of the pancreas [with summary in English]. Biul.eksp.biol. i med. 43 no.1:23-28 Ja 157. (MIRA 10:8)

1. Iz kafedry normal'noy fiziologii (zav. - chlen-korrespondent AMN SSSR prof. A.V.Kibyakov) Kazanskogo meditsinskogo instituta (dir. - dotsent P.A.Vyaselev). Predstavlena akademikom L.A.Orbeli. (NERVE MUSCIE PREPARATION.

tetanic single contractions after pancreatectomy in frogs (Rus))
(PANCREAS, effect of excision,

tetanic single contractions of nerve musc. prep. in frogs (Rus))

## ZEFIROV, L.N.

Relation between tonelike and posturel contractions [with summery in English]. Fiziol.zhur. 43 no.4:344-350 Ap 157. (MLRA 10:10)

1. Kafedra-normal'noy fiziologii Meditsinskogo instituta, Kazan'.

(REFLEX, POSTURAL,

relation of tonus-like to postural contractions (Rus))

(NERVE-MUSCLE PREPARATION,

same)